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Total Number of Pages in This Submission 23

Application Number	09/215,804
Filing Date	December 18, 1998
First Named Inventor	Mark Gavin
Art Unit	2176
Examiner Name	William L. Bashore
Attorney Docket Number	D3239-00002

ENCLOSURES (Check all that apply)

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Firm Name	Duane Morris LLP		
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Date	August 21, 2006	Reg. No.	47,006

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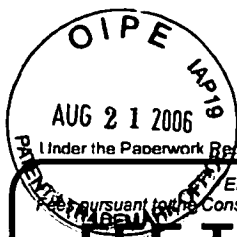
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Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL
For FY 2005☐ Applicant claims small entity status. See 37 CFR 1.27**TOTAL AMOUNT OF PAYMENT** (\$) **500.00****Complete if Known**

Application Number	10/726,986
Filing Date	December 3, 2003
First Named Inventor	David Suda et al.
Examiner Name	Stephen M. Gravini
Art Unit	3749
Attorney Docket No.	D0932-00383

METHOD OF PAYMENT (check all that apply)☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____☒ Deposit Account Deposit Account Number: **04-1679** Deposit Account Name: **Duane Morris LLP**

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☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments**WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**FEE CALCULATION****1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES**Fee Description**

	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims **Extra Claims** **Fee (\$)** **Fee Paid (\$)**

- 20 or HP = _____ x _____ = _____

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims **Extra Claims** **Fee (\$)** **Fee Paid (\$)**

- 3 or HP = _____ x _____ = _____

HP = highest number of independent claims paid for, if greater than 3.

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
_____ - 100 = _____	_____ / 50 = _____	(round up to a whole number) x _____	_____	_____

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): **Appeal Brief****Fees Paid (\$)****500.00****SUBMITTED BY**

Signature	<i>Joseph A. Powers</i>	Registration No. (Attorney/Agent) 47,006	Telephone 215-979-1842
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PATENT
Express Mail Label No: EV771956306US

Attorney Docket No.: D0932-00383

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **David Suda et al.**

Examiner: **Stephen Michael Gravini**

Serial No.: **10/726,986**

Group Art Unit: **3749**

Filed: **December 3, 2003**

Confirmation No.: **5088**

**For: FIBERGLASS INSULATION CURING
OVEN TOWER AND METHOD OF CURING
FIBERGLASS INSULATION**



Pursuant to 37 CFR §1.10, I hereby certify that this document is being deposited with the United States Postal Service on the date shown below with sufficient postage as "Express Mail Post Office to Addressee" Mailing Label Number EV771956306US to the following: Mail Stop Appeal Brief- Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Joseph A. Powers 8/21/06
Joseph A. Powers, Registration No. 47,006

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Sir:

APPEAL BRIEF

Pursuant to 37 CFR 41.37, Applicant hereby submits this appeal brief. The appeal brief is being timely submitted under 37 CFR 41.37(a). The appeal brief is being submitted in triplicate.

Respectfully Submitted,

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I. Real Party in Interest

The real party in interest is CertainTeed Corporation, present owner of the application and the invention described therein.

II. Related Appeals and Interferences

There are no related appeals or interferences.

III. Status of Claims

Claims 1, 3, 4, 7, 8, 10-16 and 20-35 are pending in the present application. Each of these claims stands rejected and is appealed.

IV. Status of Amendments

Claim 35 was amended after final to correct "system" to "method." This amendment was entered by the Examiner in the Advisory Action dated May 17, 2006.

V. Summary of Claimed Subject Matter

Applicants' invention relates to a fiberglass insulation manufacturing system and method, and more particularly to an improved curing oven as best shown in FIGS. 3 and 4 and described in Paragraphs 12-21 of the present application. Advantages of the improved design are discussed in Paragraph 20. FIG. 3 is a side elevation view of the belt assembly 110, e.g., conveyor system, of a curing oven and FIG. 4 is a system view of the curing oven system 200 including a cross-sectional view of the belt assembly 110 of FIG. 3

Independent Claim 1 is directed to an insulation manufacturing system including a curing oven tower 214 for heating an uncured or partially cured insulation mat. The curing oven tower includes a plurality of vertical oven zones comprising heat sources 208, 212. A conveyor system 110 is also provided including a plurality of pairs of counter rotating conveyors (e.g., 130b/130j, 130c/130d, 130h/130j, etc.) disposed to move the insulation mat (which is disposed therebetween) through the plurality of vertical oven zones for curing. (Paragraphs 14, 15, 19).

Independent Claim 8 is directed to a method of curing insulation including the steps of moving an uncured or partially cured insulation mat through a curing oven tower 214

comprising a plurality of vertical oven zones comprising heat sources 208, 212. The moving step includes the step of moving the insulation mat through the plurality of vertical oven zones for curing. (Paragraphs 14, 15, 19).

Independent Claim 16, like Claim 1, is directed to an insulation manufacturing system, but recites that the conveyor system comprising cooperable pairs of counter-rotating conveyors arranged for moving the insulation mat both vertically (conveyor pairs 130d/130c, 130b/130j, 130j/130h, etc.) and horizontally (conveyor pairs 130a/130b, 130b/130c, 130c/130e, 130f/130g, 130g/130h, 130h/130i) through said curing oven tower 214 in a serpentine path (See directional arrow of FIG. 3). (Paragraphs 14, 15, 19)

Independent Claim 22, like Claim 8, is directed to a method of curing insulation comprising moving an uncured or partially cured insulation mat both horizontally and vertically in a serpentine path through a curing oven tower 214 comprising a heat source 208, 212. (See. FIG. 3, Paragraphs 14, 15, 19).

VI. Grounds of Rejection to be Reviewed on Appeal

Whether Claims 1, 3-4, 16, 21 and 32-34 are properly rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 2,830,648 to Haddox.

Whether Claims 8, 10-15, 22-29 and 34 are properly rejected under § 102 as being anticipated by U.S. patent No. 2,467,291 to Brelsford et al. (Brelsford).

Whether Claims 7 and 20 are properly rejected under 35 U.S.C. § 103 as being obvious from the combination of Haddox and U.S. Patent No. 3,414,731 to Fleissner.

Whether Claim 30 is properly rejected under § 103 as being obvious from the combination of Haddox in view of U.S. Patent No. 6,357,504 to Patel et al. (Patel).

Finally, whether Claim 31 is properly rejected under § 103 as being obvious from Brelsford in view of U.S. Patent No. 6,357,504 to Patel.

VII. Argument

A. Rejection of Claims 1, 3-4, 16, 21 and 32-34 as being anticipated by Haddox

Claims 1, 3-4, 16, 21 and 32-34 stand rejected as being anticipated by Haddox. Claim 1 is presented as a first group of claims. Claims 3, 4, 16, 21, 32 and 34 are presented as a second group of claims, but separately argued. Claim 33 is presented as a third group of claims.

1. Group I (Claim 1): Haddox only conveys its mat in a horizontal direction through a horizontal oven zone.

Independent Claim 1 is rejected as being anticipated by Haddox. Claim 1 is directed to an insulation manufacturing system having a curing oven for heating an uncured or partially cured insulation mat. The curing oven tower has a plurality of vertical oven zones and a conveyor system. The conveyor system has a plurality of pairs of counter-rotating conveyors disposed to move the insulation mat through the vertical oven zones, where the insulation mat is disposed between said counter-rotating conveyors. As Haddox only moves its mat in a horizontal direction, through a horizontal oven zone, Haddox does not anticipate Claim 1.

a. The recited conveyor system must be located within the curing oven tower.

The May 17, 2006 Advisory Action states that Applicants made impermissible arguments after prosecution on the merits had been closed that “attempt to give the claims a narrower meaning.” The Advisory Action, however, does not identify the narrowing arguments that were allegedly presented by Applicants, nor does the “Notice of Panel Decision from Pre-Appeal Brief Review.” Therefore, it is unclear from the record which arguments the Examiner considered as the alleged offering of a narrow meaning to the claims. However, if the alleged “narrowing meaning” offered by the Applicants is that the conveyor is located within the oven tower, Applicants submit that this proffered construction is both consistent with the claim language and arguments presented throughout the prosecution of the present application.

Claim 1 recites that the curing oven tower comprises (i) a plurality of vertical oven zones and (ii) a conveyor system “disposed to move said mat through said plurality of vertical oven zones [of the curing oven tower] for curing.” Therefore, the plain meaning of the claim locates the conveyor system within the curing oven tower housing the vertical oven zones.

This argument is entirely consistent with those presented by Applicants before prosecution on the merits closed, such as in Applicants' January 17, 2006 Response. *See January 17, 2006 Response, at 8-9* (distinguishing conveyor of Haddox from Applicants' claimed conveyor because "within oven 40 [of Haddox], conveyor 27 only moves the mat 37 in a horizontal direction between upper and lower oven sections 38-39").

b. The conveyor of Haddox only moves the insulation mat vertically outside of the curing oven.

The conveyor system of Haddox only moves the insulation mat horizontally through a horizontal oven zone, and therefore does not "comprise a plurality of pairs of counter-rotating conveyors disposed to move said mat through said plurality of vertical oven zones for curing, the mat being disposed between said counter-rotating conveyors." In essence, Haddox discloses no more with respect to these claimed features than does the admitted prior art of FIG. 1 of the present application.

In rejecting Claim 1, the Examiner identifies oven 40 of Haddox and concludes that the oven includes a plurality of vertical oven zones 39 and 31 and a conveyor system 26 for moving the insulation mat through the vertical oven zones.

Haddox discloses that the oven of Haddox's system is "oven 40." (Col. 2, Lines 60-61). Element 31 of the system identified by the Examiner as one of the claimed vertical oven zones is a vacuum chamber connected to vacuum pump 34 that attracts the fibers 20 to the surface of the belt and retains the fibers against the belt to build up the mat 37. (Col. 2, Lines 24-32). This vacuum chamber merely accumulates fibers on a belt and is **not** a vertical oven zone with a heat source as claimed in claim 1.

As argued above, the conveyor system of claim 1 is located within the oven tower "to move said mat through said plurality of vertical oven zones for curing."

The focus, therefore, must remain with "oven 40" of Haddox, a side view of which is shown in FIG. 1. The Examiner identifies conveyor system 26 as including conveyors 58, 60, 37 and 27. Reference 37 refers to the fibrous mat, not a conveyor. (Col. 2, Line 61). Conveyor 58 include one pair of counter-rotating conveyors 59, 60 but is disposed **after** oven 40 to move the mat 37 to wind up unit 62. (Col. 3, Lines 22-24). Reference 27 refers to rollers that support a

belt 26. (Col. 2, Line 22). None of these features identified by the Examiner are within the oven 40. Belt 26 by itself is not a “pair of counter-rotating conveyors.” Belt 41 arguably cooperates with belt 26 within the oven 40, but only to move mat 37 horizontally through a conventional horizontal oven. Within and throughout oven 40, as best seen in FIG. 1, the conveyor only moves the mat 37 in a horizontal direction between “upper and lower oven sections 38 and 39.” (See FIG. 1; Col. 2, Lines 58-73). The system of Haddox does not include “a plurality of vertical oven zones” in a curing oven tower through which a conveyor system moves the insulation mat, nor a plurality of pairs of counter-rotating conveyors “disposed to move said mat through said plurality of vertical oven zones for curing.” Put another way, the oven 40 of Haddox includes a single horizontal oven zone defined between sections 38 and 39 of oven 40, not a plurality of vertical oven zones and arguably only a single pair of counter-rotating conveyors.

Therefore, per the foregoing arguments, Claim 1 is not anticipated by Haddox and is allowable thereover.

2. Group II (Claims 3, 4, 16, 21, 32 and 34): Haddox clearly does not teach or suggest serpentine movement within the oven.

a. Claims 3, 16, 32 and 34

Claim 3 depends from Claim 1 and recites that “said conveyor system comprises rotating conveyors cooperating to move said insulation mat “*both horizontally and vertically through said curing oven tower in a serpentine path.*” Claim 16, and Claim 34 through its dependency on Claim 16, also recites that the conveyors are arranged “for moving said insulation mat both vertically and horizontally through said curing oven tower in a serpentine path.”

Again, the only feature of Haddox that can be considered an oven is oven 40 of FIG. 1.

Focusing on oven 40, the Haddox system moves mat 37 through the oven 40 in a purely horizontal direction. This purely horizontal direction is not both horizontal and vertical “through said curing oven tower” nor in a serpentine path as claimed.

The Examiner points to FIGS. 1, 2 and 4 for support for the “both horizontally and vertically” in a “serpentine path” feature. The portions of the system of Haddox shown in FIGS.

2 and 4 convey the mat 37 in an angled fashion but these portions of the Haddox system are clearly outside of the oven 40 of Haddox. Therefore, Haddox does not include conveyors that cooperate to move the insulation mat “both horizontally and vertically through said curing oven in a serpentine patch.”

For these additional reasons, it is submitted that Claims 3 and 32, which depends from Claim 3, and Claims 16 and 34, which depends from Claim 16, are not anticipated by and are allowable over Haddox.

b. Claims 4 and 21

Claim 4, which depends from Claim 3, and Claim 21, which depends from Claim 16, recite that the serpentine path “vertically overlaps itself.” The Examiner relies on FIG. 4 of Haddox for this feature.

As clearly required by the claims from which Claims 4 and 21 depend, the serpentine path is through the curing oven tower. Therefore, Claims 4 and 21 require that the path of the insulation most vertically overlap itself within the oven tower. As discussed above, the path of mat 37 through the oven 40 of Haddox is purely horizontal in nature. Therefore, the path cannot vertically overlap itself. FIG. 4 of Haddox shows an angled conveyance of the mat 37 outside of the oven 40, but this is irrelevant with respect to the claim limitation.

For these additional reasons, it is submitted that Claims 4 and 21 are not anticipated by and are allowable over Haddox.

3. Groups III (Claim 33)

Claim 33 depends from Claim 13, which does not stand rejected as being anticipated by Haddox. Accordingly, it is submitted that Claim 33 is not anticipated by Haddox.

B. Rejection of Claims 8, 10-15, 22-29 and 34 as being anticipated by Breilsford

Claims 8, 10-15, 22-29 and 34 stand rejected as being anticipated by Haddox. Claims 8, 14 and 15 are presented as a first group of claims. Claims 10-13, and 22-29 are presented as a second group of claims, but separately argued. Claim 34 is presented as a third group of claims.

1. **Group I (Claims 8, 14 and 15): Brelsford only conveys its mat in a horizontal direction through a horizontal oven zone.**

Independent Claim 8 is rejected as being anticipated by Brelsford. Claim 8 is directed to a method of curing insulation comprising moving an uncured or partially cured insulation mat through a curing oven tower. The curing oven tower includes a plurality of vertical oven zones comprising heat sources and the moving step includes the step of moving the insulation mat through the plurality of vertical oven zones. As Brelsford only includes one horizontal oven zone and only moves its mat in a horizontal direction, through the horizontal oven zone, Brelsford does not anticipate Claim 8.

FIG. 1 shows the complete system of Brelsford including curing oven 74, which is shown best in the side view of FIG. 6 and end view of FIG. 7. A single floor apron conveyor 51 brings the matt fibers laid by the “cross lapper” into the “curing oven” 74. (FIG. 1) The curing oven of Brelsford includes a lower conveyor 81 and an upper conveyor 82 (FIG. 6 and 7)

Within the curing oven 74, the positioning of the upper and lower conveyors 81, 82 determines the thickness of the mat. (Col. 8, Lines 41-48). As shown in FIGS. 6 and 7, the single pair of conveyor 81, 82 rotates to move the mat through the curing over. The lower conveyor 81 is fixed. (Col. 8, Line 56). The upper conveyor is adjusted to the proper position to provide a desired thickness. (Col. 10, Lines 20-26). The mat “arrives from the cross lapper on the floor apron [51 and] is transferred . . . onto the lower conveyor [81].” Id. The upper conveyor 82 “squeezes the mat to the desired thickness.” Id.

The mat is shown in FIG. 7 between the pair of conveyors 81, 82 and the burners 98. The oven of Brelsford does not include a plurality of vertical oven zones comprising heat sources as claimed. Rows of burners 98 are horizontally spaced along the length of the oven to provide one or more horizontal, not vertical, oven zones between the conveyors 81, 82. In the Action, the Examiner cites to “vertical oven zones 112 and 113” in Brelsford’s system. However, Brelsford’s makes clear that its oven 74 is broken functionally into three horizontal zones, diagrammatically delineated by vertical dashed line partition references 112, 113:

In order to uniformly heat the mat during curing, besides locating the burners between the upper and lower conveyors to evenly distribute the heat, the oven is partitioned into three zones, the vertical partitions shown diagrammatically by

dotted lines 112 and 113. These partitions have openings therethrough to permit passage of the conveyor flights and mat. The first zone extending from the inlet end of the oven to partition 112 has a top outlet breeching 115 connected to an exhaust fan by pipe 116. Thus, in the first zone the heated air is drawn upwardly through the mat and is discharged from the oven above. In the second zone between partitions 112 and 113 the heated air is withdrawn from the oven through pipe 117 positioned above the mat and is discharged by means of a blower fan 118 back into the oven below the mat through pipe 119. . . In the third zone between partition 113 and the discharge end of the oven heated air from the oven is withdrawn from below the mat through pipe 121 and is discharged by fan 122 through pipe 123 into the oven above the mat after with a portion is exhausted through outlet breeching 114.

Col. 9, Line 51-Col. 10, Line 5.

The direction of conveying of the mat during its formation prior to curing oven 74 is of no consequence with respect to the claimed method as it does not constitute "moving an uncured or partially cured insulation mat through a curing oven tower" as claimed. As is clearly shown in Figures 5-7 of Brelsford, the mat is conveyed in only the horizontal direction during curing. The oven zone or zones are arranged horizontally between burners 98. The oven of Brelsford, therefore, does not include a plurality of vertical oven zones through which a mat is conveyed.

Therefore, from these figures and their accompanying description, it is clear that Brelsford does not teach a curing oven tower comprising a plurality of vertical oven zones as claimed in Claim 8 nor moving an insulation mat through the "vertical oven zones" as claimed. Claim 8 and Claims 14 and 15, which depend from Claim 8, are not anticipated by Brelsford.

2. Group II (Claims 10-13, and 22-29): Brelsford clearly does not teach or suggest serpentine movement within the oven.

a. Claims 10, 22-24, 27 and 28

Claim 10 depends from claim 8 and recites further that the moving step of the claimed method includes the step of moving the insulation mat both horizontally and vertically *through the curing oven* in a serpentine path. As described above, the mat of Brelsford is only moved horizontally through the curing oven 74 shown in FIGS. 1 and 5-7 of Brelsford. The top conveyor 82 is initially angled to provide an input taper that pinches the loose fibers, which are conveyed by conveyor 51 to bottom conveyor 81. Bottom conveyor 81 exists entirely in one plane. It is submitted that this compression configuration, which is provided before the mat

fibers are exposed to burners 98, does not move the mat both vertically and horizontally through a plurality of vertical oven zones, and certainly not in a serpentine path as claimed in claim 10.

In support of the rejection of Claim 10, the Examiner cites to FIGS. 1 and 2 of Brelsford. The curing oven of Brelsford shown in FIG. 1 is labeled "Curing Oven" and identified by reference 74. Clearly, no horizontal and vertical serpentine movement can be discerned within curing oven 74 from FIG. 1. Turning to FIG. 2, FIG. 2 is an enlarged detail view of the cross lapper 28. The "cross lapper" is labeled in FIG. 1. The cross lapper is clearly disposed before the curing oven 74. Indeed, FIG. 2 shows "floor apron" 51 under the cross lapper. Also, as argued above, the open-mouth configuration of the top conveyer 82 does not constitute a movement of the mat in a horizontal and vertical direction through the curing oven in a serpentine path, but rather is merely serves to compress the mat fibers as they are conveyed horizontally.

Therefore, because any moving step of Brelsford through the oven 74 does not include moving the insulation mat both horizontally and vertically *through the curing oven* in a serpentine path, Claim 10 is not anticipated by Brelsford.

Independent Claim 22 also recites a method of curing insulation including the step of "moving an uncured or partially cured insulation mat both horizontally and vertically in a serpentine path through a curing oven tower comprising a heat source." Clearly, as discussed above and as seen in FIGS. 6 and 7 of Brelsford, Brelsford's conveyors 81 and 82 within the oven 74 cooperate to move the insulation mat in a purely horizontal direction through oven 74, which is in no way "horizontally and vertically in a serpentine path." Claim 22, therefore, and Claims 23-24 and 27-28, which depend from Claim 22, are not anticipated by Brelsford.

b. Claims 11-12, 26 and 29

Claims 11-12 depend from Claim 10 and Claims 26 and 29 depend from Claim 22. These claims each recite that the "serpentine path" of the insulation mat in the claimed method "vertically overlaps itself." The Examiner again relies on FIGS. 1 and 2 of Brelsford for this feature.

As discussed above, the path of mat through the curing oven 74 of Brelsford is purely horizontal in nature. Therefore, not only is the path not horizontally and vertically serpentine, the path cannot vertically overlap itself.

Therefore, Claims 11-13 and 26-29 are not anticipated by Brelsford and are allowable thereover.

c. Claims 13 and 25

Claims 13 and 25 recite that the conveyor system of the oven tower that performs the recited conveying step (moving the mat both horizontally and vertically through the curing oven in a serpentine path) comprises “a plurality of pairs of counter-rotating conveyors that cooperate to move said insulation mat through said oven tower.” FIG. 6 of Brelsford clearly shows that the “curing oven” 74 of Brelsford includes one pair of conveyers – conveyors 81, 82, not plurality of pairs of counter-rotating conveyors.

Therefore, for these additional reasons, Claims 13 and 25 are not anticipated.

3. Group III (Claim 34)

Claim 34 depends from Claim 16, which does not stand rejected as being anticipated by Brelsford. Accordingly, it is submitted that Claim 34 is not anticipated by Brelsford.

C. Rejection of Claims 7 and 20 as being obvious from Haddox in view of Fleissner

Claims 7 and 20 are rejected as being obvious from Haddox in view of Fleissner. Claims 7 and 20 depend from Claims 1 and 16, respectively, and are, therefore, allowable for at least the reasons set forth above in connection therewith.

D. Rejection of Claim 30 as being obvious Haddox in view of Patel

Claim 30 is rejected as being obvious from Haddox in view of Patel. Claim 30, which depends from Claim 3, recites, with emphasis, “wherein a *portion of said rotating conveyors cooperating to move said insulation mat vertically forms nip zone with a portion of said rotating conveyors cooperating to move said insulation horizontally*, said nip zone **including at least one inclined belt for receiving said insulation mat.**” Claim 30, therefore, requires not

only that the nip zone is formed by conveyors that are moving the insulation mat horizontally and those that are moving the mat vertically through the curing oven tower, but also “includes at least one inclined belt for receiving said insulation mat.” Further, the nip zone and conveyors must be within the curing oven (as argued above in connection with Claim 1 and 3).

The “nip” identified by the Examiner (Column 12, Lines 22-65) is shown in FIG. 10. This “nip” (also called a “pinch” by Patel) is formed between rotating pressing rolls 116A and 118A and between pressing rolls 116B and 118B. These rolls pinch a sheet 64a against the top surface of a mat, which is conveyed in a purely horizontal direction by single horizontal conveyor 112 (which, incidentally, forms no part of the “nip” of Patel). Simply, Patel does not disclose a nip zone formed by horizontal and vertical cooperating conveyors, nor a nip zone “including at least one inclined belt for receiving said insulation mat.” Therefore, it is submitted that the combination of Haddox and Patel does not teach each feature of Claim 30. Claim 30, therefore, is not obvious from and is allowable over the cited combination.

E. Rejection of Claim 31 as being obvious from Breilsford in view of Patel

Claim 31 is rejected as being obvious from Breilsford in view of Patel. Like Claim 30, Claim 31 recites that the uncured or partially cured mat is transported through a nip zone formed between a horizontally disposed rotating conveyor and a vertically disposed rotating conveyor, said nip zone having at least one inclined belt for receiving said uncured or partially cured mat.

Because, Patel does not disclose a nip zone formed by horizontal and vertical cooperating conveyors, nor a nip zone “having at least one inclined belt for receiving said uncured or partially cured mat,” the combination of Breilsford and Patel does not teach each feature of Claim 31. Claim 31, therefore, is not obvious from and is allowable over the cited combination.

CLAIMS APPENDIX

1. (previously presented) An insulation manufacturing system comprising a curing oven tower for heating an uncured or partially cured insulation mat, said curing oven tower comprising a plurality of vertical oven zones comprising heat sources, and a conveyor system comprising a plurality of pairs of counter-rotating conveyors disposed to move said mat through said plurality of vertical oven zones for curing, said mat being disposed between said counter-rotating conveyors.

2. (canceled)

3. (previously presented) The system of claim 1, wherein said conveyor system comprises rotating conveyors cooperating to move said insulation mat both horizontally and vertically through said curing oven tower in a serpentine path.

4. (original) The system of claim 3, wherein said path vertically overlaps itself.

5-6. (canceled)

7. (original) The system of claim 1, further comprising recirculating means for recirculating air from a region proximate to the top of said curing oven tower to a region proximate to a bottom of said curing oven tower.

8. (previously presented) A method of curing insulation comprising moving an uncured or partially cured insulation mat through a curing oven tower, said curing oven tower comprising a plurality of vertical oven zones comprising heat sources, said moving step including the step of moving the insulation mat through the plurality of vertical oven zones for curing.

9. (canceled)

10. (previously presented) The method of claim 8, wherein said moving step includes the step of moving said insulation mat both horizontally and vertically through said curing oven in a serpentine path.

11. (original) The method of claim 10, wherein said path vertically overlaps itself.

12. (previously presented) The method of claim 11, wherein said moving step includes the step of conveying said insulation mat with a plurality of conveyors disposed to move said insulation mat both horizontally and vertically through said oven tower.

13. (previously presented) The method of claim 12, wherein said plurality of conveyors comprises a plurality of pairs of counter rotating conveyors that cooperate to move said insulation mat through said oven tower.

14. (original) The method of claim 8, further comprising the step of recirculating air from a region proximate to the top of said curing oven tower to a region proximate to a bottom of said curing oven tower.

15. (previously presented) The method of claim 8, wherein said insulation mat comprises glass fibers.

16. (previously presented) A insulation manufacturing system comprising a curing oven tower for heating an uncured or partially cured fiberglass insulation mat, said curing oven tower comprising a heat source and a conveyor system comprising cooperable pairs of counter-rotating conveyors arranged for moving said insulation mat both vertically and horizontally through said curing oven tower in a serpentine path.

17-19. (canceled)

20. (original) The system of claim 16, further comprising recirculating means for recirculating air from a region proximate to the top of said curing oven tower to a region proximate to a bottom of said curing oven tower.

21. (original) The system claim 16, wherein said serpentine path vertically overlaps itself.

22. (previously presented) A method of curing insulation comprising moving an uncured or partially cured insulation mat both horizontally and vertically in a serpentine path through a curing oven tower comprising a heat source.

23. (previously presented) The method of claim 22, wherein said curing oven tower comprises a conveyor system for moving said insulation mat both vertically and horizontally through said curing oven tower, said moving step comprising the step of conveying said insulation mat with said conveyor system.

24. (previously presented) The method of claim 23, wherein said conveying step includes the step of conveying said insulation mat with a plurality of cooperable conveyors disposed to move said insulation mat both horizontally and vertically through said oven tower.

25. (previously presented) The method of claim 24, wherein said plurality of conveyors comprises a plurality of pairs of counter rotating conveyors that cooperate to move said insulation mat through said oven tower.

26. (original) The method of claim 24, wherein said serpentine path vertically overlaps itself.

27. (original) The method of claim 22, further comprising the step of recirculating air from a region proximate to the top of said curing oven tower to a region proximate to a bottom of said curing oven tower.

28. (previously presented) The method of claim 22, wherein said insulation mat comprises fiberglass.

29. (original) The method of claim 22, wherein said serpentine path vertically overlaps itself.

30. (previously presented) The system of claim 3, wherein a portion of said rotating conveyors cooperating to move said insulation mat vertically forms nip zone with a portion of said rotating conveyors cooperating to move said insulation horizontally, said nip zone including at least one inclined belt for receiving said insulation mat.

31. (previously presented) The method of claim 22, wherein said uncured or partially cured mat is transported through a nip zone formed between a horizontally disposed rotating conveyor and a vertically disposed rotating conveyor, said nip zone having a least one inclined belt for receiving said uncured or partially cured mat.

32. (previously presented) The insulation manufacturing system of claim 3, wherein at least some of the conveyors comprise spaced flights having perforations therein, thereby allowing heated air to pass through the flights.

33. (previously presented) The method of claim 13, wherein at least some of the conveyors comprise spaced flights having perforations therein, thereby allowing heated air to pass through the flights.

34. (previously presented) The insulation manufacturing system of claim 16, wherein at least some of the conveyors comprise spaced flights having perforations therein, thereby allowing heated air to pass through the flights.

35. (previously presented) The method claim 25, wherein at least some of the conveyors comprise spaced flights having perforations therein, thereby allowing heated air to pass through the flights.

EVIDENCE APPENDIX

Applicants rely on no evidence submitted pursuant to 37 CFR §§1.130-1.132 or otherwise in this appeal.

RELATED PROCEEDINGS APPENDIX

As set forth above, there are no related appeals and interferences and thus no decisions to be submitted.